



February 5, 2015

Project 0106270030

Ms. Chand Sultana
Department of Toxic Substances Control
9211 Oakdale Avenue
Chatsworth, CA 91311

**Re: Response to DTSC Comments
Phase V Completion Report
Former Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue, Vernon, California**

Dear Ms. Sultana:

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler, formerly AMEC), on behalf of Pechiney Cast Plate, Inc. (Pechiney), has prepared this letter to provide a response to the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) comments presented in the November 24, 2014 memorandum and the Geological Services Unit (GSU) comments presented in the December 19, 2014 memorandum regarding the Phase V Completion Report. The comments are provided below with a response following each comment.

COMMENTS – HERO November 24, 2014 Memorandum

HERO Comment 1. SCOPE: HERO defers to DTSC Project Management staff on appropriateness of the sample locations and analyses conducted.

Response: No response required.

HERO Comment 2. OVERVIEW: In general, the report is well written and appears to demonstrate the removal of soil from areas identified with concentrations above the approved risk-based cleanup goals (RBCGs). HERO is unable to draw a conclusion on the adequacy of the Phase 5 Soil RACR due to a few aspects that require clarification. HERO recommends submittal of responses to comments to Comments 3 through 7, presented below.

Response: This letter includes the response to HERO Comments 3 through 7.

HERO Comment 3. PAHs and DIOXINS/FURANS: There are no remediation goals for polynuclear aromatic hydrocarbons (PAHs) or dioxins/furans which may have been formed during burning. The report did not address whether PAHs or dioxins and furans were included in the analysis of soil from burn pits or areas with residue. Please discuss in the responses to comments whether PAHs and dioxins/furans were included in the site characterization and risk assessment, discuss the rationale for this decision in the responses to comments.

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Response: As noted in our response to comments on the Phase III, IV, and VI Completion Report, PAHs or dioxins/furans were not identified as a COC for the site. The Swindell Pit Furnace or other furnaces were used to melt metals, primarily aluminum and not organic compounds; therefore, partial combustion of organic matter would not occur. The melting point for aluminum is 1200 degrees Fahrenheit (°F), which is well above the temperature that would result in the formation of PAHs or dioxins/furans. These compounds typically form at temperatures ranging between 550 °F and 800 °F. Furnaces or furnace operations were not present in the Phase V area based on review of historical records. Based on historical documents and field observations, soil sampling and analyses for PAHs or dioxins/furans were not warranted. The material encountered that had a “burned” appearance was mixed with other debris and did not appear to be burned in place. The text in the Remarks column for sample #1070 in Table 5 has been revised to reflect this. This debris, including the “burned” looking material, was excavated and disposed of offsite.

HERO Comment 4. AREA RELEASED for COMPLETION: Contrary to page 7, Section 4, there is no text in Section 7 discussing which portions of the Phase V area “were released for completion”. Please provide in the responses to comments discussion and maps with the portions of Phase V area released for completion.

Response: The text in Section 4 was referring to areas discussed in Section 7 where soil excavation occurred. The soil excavation areas are shown on Figure 5 of the Phase V Completion Report, and at the time of the submittal of the Phase V Completion Report, the Phase V area (areas of shallow excavations and areas where slabs or structures were removed) were released for completion. The text in Section 7 will be updated in the Final Phase V Completion Report to clarify this point.

HERO Comment 5. SOIL SAMPLE DEPTHS: Lack of sample depths prohibited interpretation of the soil confirmation sampling for removal where remedial goals were exceeded for metals. HERO recommends including in the responses to comments a revised Table 5, “Soil Sample Results – Metals” containing an additional column with the soil sample depths.

Response: Sample depths and elevations were inadvertently omitted from Table 5 of the Phase V Completion Report submitted to DTSC. Table 5 has been revised to include the missing depth/elevation information, and a copy of the revised table is attached. The revised table will be included in the Final Phase V Completion Report.

HERO Comment 6. SOIL REMAINING ABOVE REMEDIAL GOALS: There are instances where soil samples with concentrations above the remedial goals apparently were left in place, for example samples 925-SS-008 and 925-SS-004 had soil concentrations of total chromium at 26.6 and 46.4 mg/kg, respectively, as compared to the remedial goal of 25 mg/kg. HERO

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recommends discussing in the responses to comments all chemicals of concern (COCs) left in place above remedial goals.

Response: Site-specific background concentrations and risk-based screening levels (RBSLs) derived from the HHRA were used to evaluate metals concentrations (other than arsenic which has a site-specific remediation goal of 10 mg/kg as noted in Table 1B of the RAP). For clarity, Table 1 of the Phase V Completion Report was updated to include the RBSLs for chromium. The chromium RBSL (cancer) for the outdoor commercial/industrial worker is 640 mg/kg. The chromium concentrations in 925-SS-008 and 925-SS-004 are both below the risk-based screening level. In the Phase V area, metals were not left in place above the RBSLs.

HERO General Comment 7: HEXAVALENT CHROMIUM: As noted above in Comment 6, elevated concentrations of total chromium were detected in the Phase V Area soil. The report does not address the carcinogenic form of chromium, hexavalent chromium. HERO recommends addressing in the responses to comments whether hexavalent chromium was evaluated in the risk assessment.

Response: As noted in our response to comments on the Phase III, IV, and VI Completion Report, hexavalent chromium was not identified as a COC associated with the former aluminum manufacturing operations. Hexavalent chromium was included in the site characterization prior to implementation of the below grade demolition. Boring #46, drilled in the former cooling tower area, had a detection of hexavalent chromium at a concentration of 0.35 milligrams per kilogram (mg/kg) in the sample collected at 21 feet. Additional borings (#104, #105, #106, and #112) were advanced to further characterize the presence of hexavalent chromium during a supplemental investigation. Soil samples were collected from these borings at multiple depths ranging from 3 to 33 feet below grade. Hexavalent chromium was not detected in any of these soil samples. No potential sources of chromium or hexavalent chromium were suspected in the Phase V area; however, fill material containing elevated levels TPH, lead, and chromium were encountered in soil in the west side of the Phase V area, but appeared to be associated with areas where broken glass, brick, wire, and ceramic plates were observed in the fill material. Metals impacted soil and fill material were removed and based on the condition of the debris, laboratory analysis for hexavalent chromium was not warranted.

COMMENTS – GSU December 18, 2014 Memorandum

GSU Comment: Section 2.0 Scope of Work and Remediation Goals – The last sentence in this section states that the site-specific PCB remediation goal for concrete was set at greater than 1 mg/kg. Table 1 Site Specific Remediation Goals, lists the Remediation Goal for PCBs as 3.5 mg/kg. The discrepancy between the two values should be resolved.



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Response: The City of Vernon (agency) required that the “Restricted Fill” outlined in the RAP not be placed onsite. As such, concrete containing PCBs at concentrations greater than 1 mg/kg and less than 3.5 mg/kg were demarcated, removed and shipped offsite for disposal. Table 1 has been updated to reflect this information and the revised table is attached. The text of the report will be updated for clarification.

GSU Comment: Section 4.0 Soil Removal, Verification Sampling, Backfill – The third paragraph in this section states that “The remaining soil sample locations shown in black on Figure 5 remain in place and the concentrations of constituents of concern are below the site-specific remediation goals.” The remediation goal for chromium listed in Table 1 (Site-Specific Remediation Goals) is 25 mg/kg. Several samples listed on Table 5 (Soil Sample Results – Metals) have concentrations of chromium which are greater than 25 mg/kg. These are 925-SS-004 (45.3 mg/kg), 925-SS-008 (26.6 mg/kg) and 1247 (35.1 mg/kg). Samples proximal to these locations do not show elevated concentrations. These concentrations are within the range of background concentrations for the Southern California area, and well below the California Human Health Screening Levels (CHHSL).

GSU staff do not consider that any additional sampling or removal of soil in these areas is warranted. However, the statement in the third paragraph should be supported by additional text to justify leaving the soil in place.

Response: Site-specific background concentrations and risk-based screening levels (RBSLs) derived from the HHRA were used to evaluate metals concentrations (other than arsenic which has a site-specific remediation goal of 10 mg/kg as noted in Table 1B of the RAP). For chromium the site-specific background concentration is 25 mg/kg. The RBSL (cancer) for the outdoor commercial/industrial worker of 640 mg/kg was not included in Table 1. The concentrations of chromium that remains in soil are below the RBSL. Table 1 of the Phase V Completion Report was updated to include the RBSL for chromium, and a copy of the revised table is attached.

If you have any questions or need any additional information, please call Linda Conlan at (949) 642-0245.

Sincerely yours,
Amec Foster Wheeler

A handwritten signature in cursive script that reads "Linda Conlan".

Linda Conlan, PG
Principal Geologist



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cc: William Adams, Pechiney
Gerald Pepper, Rio Tinto AUM Company
John Cermak, Baker & Hostetler, LLP
Bruce Greene, Baker & Hostetler, LLP
Allan Plaza, DTSC Chatsworth
Bruce Garbaccio, DTSC Chatsworth
Leonard Grossberg, City of Vernon Environmental Health Department
Samuel Kevin Wilson, City of Vernon Environmental Health Department
Carmen Santos, US EPA Region 9

TABLE 1
SITE-SPECIFIC REMEDIATION GOALS -
PCBs IN SOIL AND CONCRETE, AND METALS AND TPH IN SOIL
Phase V Area - Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

January 29, 2015 Rev1

Compound	Remediation Goal (mg/kg)	Explanation
PCBs in Soil		
Aroclor-1254	2.0	Noncarcinogenic RBSL ¹ for construction workers. Also protective of commercial/industrial worker exposure.
Total Aroclors <i>For soil that may be left exposed at the surface (0 to 5 feet bgs)</i>	3.5	Based on the regression analysis for dioxin-like PCB congeners versus total Aroclors in combined soil and concrete presented in Appendix E of the FS (AMEC, 2012a), the total Aroclor concentration that would result in a maximum dioxin TEQ concentration of 81 pg/g. ² Protective of cumulative commercial/industrial worker exposure, and cumulative construction worker exposure, to PCBs.
Total Aroclors <i>For subsurface soil (5 to 15 feet bgs) that only construction workers may come into contact with during excavation, grading, etc. (and that would remain at 5 to 15 feet bgs)</i>	23	Based on the regression analysis for dioxin-like PCB congeners versus total Aroclors in combined soil and concrete presented in Appendix E of the FS (AMEC, 2012a), the total Aroclor concentration that would result in a maximum dioxin TEQ concentration of 530 pg/g. ³ Protective of cumulative construction worker exposure to PCBs.
PCBs in Concrete		
Total Aroclors	1.0* 3.5	Based on the regression analysis for dioxin-like PCB congeners versus total Aroclors in combined soil and concrete presented in Appendix E of the FS (AMEC, 2012a), the total Aroclor concentration 3.5 mg/kg that would result in a maximum dioxin TEQ concentration of 81 pg/g. Also protective of cumulative construction worker exposure to PCBs. Applying this remediation goal ensures that waste criteria for concrete containing PCBs is also met [i.e., less than 50 mg/kg, as defined in 40 CFR Section 761.61(a)(4)(i)(A)]. * As required by the City of Vernon (agency), the remediation goal for concrete was reduced to a concentration greater than 1 mg/kg to eliminate the placement of "Restricted Fill" onsite. As presented in the RAP (AMEC, 2012c), Restricted Fill was defined as concrete with PCBs at concentrations greater than 1 mg/kg and less than or equal to 3.5 mg/kg.
Metals in Soil		
Arsenic	10	Site-Specific Background Concentration in Soil, established as described in Appendix B of the FS (AMEC, 2012a).
Chromium	25	Site-Specific Background Concentration in Soil, established as described in Appendix B of the FS (AMEC, 2012a).
	640	RBSL in Soil for Outdoor Commercial/Industrial Worker, established as described in Appendix C of the FS (AMEC, 2012a)
Lead	320	RBSL in Soil for Outdoor Commercial/Industrial Worker, established as described in Appendix C of the FS (AMEC, 2012a).

TABLE 1
SITE-SPECIFIC REMEDIATION GOALS -
PCBs IN SOIL AND CONCRETE, AND METALS AND TPH IN SOIL
Phase V Area - Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

January 29, 2015 Rev1

Compound	Remediation Goal (mg/kg)	Explanation
TPH in Soil		
c5-c10 hydrocarbons, c6-c10 hydrocarbons, c7-c12 hydrocarbons, and Stoddard solvent	500	Screening Level for the Protection of Groundwater for TPH gasoline range (c4-c12) from the Los Angeles RWQCB Guidebook. ⁴
c10-c20 hydrocarbons and c10-c28 hydrocarbons	1000	Screening Level for the Protection of Groundwater for TPH diesel range (c13-c22) from the Los Angeles RWQCB Guidebook. ⁴
c21-c28 hydrocarbons	10,000	Screening Level for the Protection of Groundwater for TPH as residual fuel (c23-c32) from the Los Angeles RWQCB Guidebook. ⁴

Notes

1. Developed based on the methodology described in Appendix C of the FS (AMEC, 2012). RBSLs were used to conduct the screening-level human health risk assessment for the Site.
2. Based on the carcinogenic RBSL for dioxin-like PCB congeners for outdoor commercial/industrial workers (8.1 pg/g TEQ), adjusted to a target cancer risk of 10⁻⁵.
3. Based on the carcinogenic RBSL for dioxin-like PCB congeners for construction workers (53 pg/g TEQ), adjusted to a target cancer risk of 10⁻⁵.
4. Los Angeles RWQCB Interim Site Assessment and Cleanup Guidebook (RWQCB Guidebook, May 1996; updated May 2004), for petroleum hydrocarbons and aromatic hydrocarbons (benzene, toluene, ethylbenzene, and total xylenes [BTEX] compounds) in soil. The selected screening levels were taken from Table 4-1 assuming distance above groundwater is 20 to 150 feet.

Abbreviations

bgs = below ground surface	RWQCB = California Regional Water Quality Control Board
CFR = Code of Federal Regulations	TEQ = toxic equivalent
FS = Feasibility Study	TPH = total petroleum hydrocarbons
mg/kg = milligrams per kilogram	
PCBs = polychlorinated biphenyls	
pg/g = picograms/gram	
RBSL = risk-based screening level	

TABLE 5
SOIL SAMPLE RESULTS - METALS
Phase V Area - Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

EPA Test Method 6010/7242, units in mg/kg																											
Sample ID	Map Reference ID	Date Sampled	Concrete Removal Area or Grid	Soil Removal Area	Associated Structure Number	Status	Sample Matrix	Sample Depth - Bottom (feet bls)	Sample Elevation (MSL)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium, Total	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury	Remarks
908-V-P/S-O-001	908-S-001	6/10/2014	NA	NA	908	D	ot	0	187	2.2	25	559	<0.254	16	113	30.7	4620	1390	27.6	91.8	<0.761	1	<0.761	38.6	3310	0.167	Sediment inside structure
925-V-R/R-SS-001	925-SS-001	7/9/2014	NA	NA	925	V	so	2	176	<0.769UJ	1.14	143	0.387	<0.513	18.1	12.5	17.8	2	<0.256	13.2	<0.769	<0.256	<0.769UJ	40.6	58.5	<0.0833	Collected after ballast was cleaned out; Parcel 6 (Rail Spurs)
925-V-R/R-SS-002	925-SS-002	7/9/2014	NA	NA	925	V	so	2	176	<0.739UJ	<0.739	125	0.368	<0.493	16.6	11.3	15.9	2.03	<0.246	11.5	<0.739	<0.246	<0.739UJ	38.5	52.4	<0.082	Collected after ballast was cleaned out; Parcel 6 (Rail Spurs)
925-V-R/R-SS-003	925-SS-003	7/9/2014	NA	NA	925	V	so	2	176	<0.725UJ	<0.725	117	0.34	<0.483	16.1	10.7	15	2.91	<0.242	11.3	<0.725	<0.242	<0.725UJ	35.5	50.8	<0.082	Collected after ballast was cleaned out; Parcel 6 (Rail Spurs)
925-V-R/R-SS-004	925-SS-004	7/9/2014	NA	NA	925	V	so	2	176	<0.728UJ	5.08	151	0.481	<0.485	46.4	31.7	116	90.3	0.589	45.3	<0.728	<0.243	<0.728UJ	39.7	237	0.171	Collected after ballast was cleaned out; Parcel 6 (Rail Spurs)
925-V-R/R-SS-005	925-SS-005	7/9/2014	NA	NA	925	V	so	2	176	<0.714UJ	<0.714	123	0.376	<0.476	17.3	11.5	16.6	2.06	<0.238	12	<0.714	<0.238	<0.714UJ	40.2	49.8	<0.0794	Collected after ballast was cleaned out; Parcel 6 (Rail Spurs)
925-V-R/R-SS-006	925-SS-006	7/9/2014	NA	NA	925	V	so	2	176	<0.761UJ	<0.761	120	0.347	<0.508	16.4	10.9	15	3.22	<0.254	11.5	<0.761	<0.254	<0.761UJ	37.4	54.3	<0.082	Collected after ballast was cleaned out; Parcel 6 (Rail Spurs)
925-V-R/R-SS-007	925-SS-007	7/9/2014	NA	NA	925	V	so	2	176	<0.765UJ	<0.765	113	0.336	<0.51	16.3	10.6	17.4	6.45	0.299	12.7	<0.765	<0.255	<0.765UJ	35.8	54	<0.0862	Collected after ballast was cleaned out; Parcel 6 (Rail Spurs)
925-V-R/R-SS-008	925-SS-008	8/4/2014	NA	NA	925	V	so	1	176	<0.758	3.52	154	0.316	<0.505	26.6	14.2	103	47.8	0.458	48.3	<0.758	<0.253	<0.758	28.1	195	0.101	Beneath rail line, in front of Gate
925-V-R/R-SS-009	925-SS-009	8/4/2014	NA	NA	925	E	so	1	176	<0.754	10.3	729	0.321	13.9	190	31.8	538	798	8.33	103	<0.754	<0.251	<0.754	36.7	2670	1.97	Beneath rail line, in front of Gate
925-V-R/R-SS-010	925-SS-010	8/11/2014	NA	NA	925	V	so	2	185	2.73	1.96	357	0.353	1.47	19.1	11.6	73.8	151	<0.248	20.1	<0.743	<0.248	<0.743	32.5	1350	0.162	Verification sample for SS-009 soil removal
925-V-R/R-SS-011	925-SS-011	8/11/2014	NA	NA	925	V	so	2	185	<0.75	1.45	223	0.324	1.02	18.8	11.7	56	124	0.436	15.1	<0.75	<0.25	<0.75	30.5	734	<0.0806	Verification sample for SS-009 soil removal
925-V-R/R-SS-012	925-SS-012	8/11/2014	NA	NA	925	V	so	2	185	1.93	3.11	307	0.354	1.46	23	12.9	91.7	199	0.807	20.7	<0.739	<0.246	<0.739	33.7	1100	0.195	Verification sample for SS-009 soil removal
925-V-R/R-SS-013	925-SS-013	8/11/2014	NA	NA	925	V	so	3	184	<0.739	<0.739	178	0.36	<0.493	17.2	12	40.2	61.3	<0.246	14.1	<0.739	<0.246	<0.739	33.9	338	<0.0806	Verification sample for SS-009 soil removal
925-V-R/R-SS-014	925-SS-014	8/11/2014	NA	NA	925	V	so	3	184	<0.735	<0.735	185	0.312	<0.49	15	10.1	40	64.5	<0.245	12.3	<0.735	<0.245	<0.735	29	403	0.957	Verification sample for SS-009 soil removal
925-V-R/R-SS-015	925-SS-015	8/11/2014	NA	NA	925	V	so	3	184	<0.739	1.07	150	0.336	<0.493	15.2	10.9	27.5	86.5	<0.246	12.8	<0.739	<0.246	<0.739	32.2	153	0.236	Verification sample for SS-009 soil removal area
#1056	#1056	5/22/2014	NA	NA	NA	E	so	0.75	177.25	15.1	3.2	142	0.342	<0.5	30.1	12.6	70.2	377	0.74	89.5	<0.75	<0.25	<0.75	50.6	328	0.364	West parcel, soil, greenish colored, TPH odor
#1057	#1057	5/22/2014	NA	NA	NA	E	so	0.75	177.25	<0.75	3.04	71.5	<0.25	0.798	46.5	7.06	80.8	104	11.2	53.8	<0.75	<0.25	<0.75	22.8	346	<0.0833	West parcel, soil, brown/black colored, no observable odor, sediment
#1058	#1058	5/22/2014	NA	NA	NA	E	so	0.75	177.25	<0.75	21.9	80.2	<0.25	<0.5	58.2	28.4	262	18.5	0.676	116	<0.75	<0.25	<0.75	19.3	78.4	<0.0794	West parcel, soil, reddish rust below pavement
#1059	#1059	5/22/2014	NA	NA	NA	E	so	0.75	177.25	<0.735	39.5	56.5	<0.245	<0.49	108	25.5	438	45.5	2.45	416	<0.735	<0.245	<0.735	2.47	57.9	<0.0847	West parcel, gray slag material below pavement
#1060	#1060	5/22/2014	NA	NA	NA	E	so	0.75	177.25	<0.743	7.37	129	0.328	<0.495	27.1	13.1	83.9	20.2	0.359	109	<0.743	<0.248	<0.743	31.5	86.7	<0.082	West parcel, soil, dark gray, some odor observable (potential hydrocarbon)

TABLE 5
SOIL SAMPLE RESULTS - METALS
Phase V Area - Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

EPA Test Method 6010/7242, units in mg/kg

Sample ID	Map Reference ID	Date Sampled	Concrete Removal Area or Grid	Soil Removal Area	Associated Structure Number	Status	Sample Matrix	Sample Depth - Bottom (feet bls)	Sample Elevation (MSL)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium, Total	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury	Remarks
#1066	#1066	5/29/2014	NA	NA	NA	D	ot	1	176	<0.758UJ	<0.758	0.644	<0.253	<0.505	0.334	<0.253	<0.505	1.5	<0.253	0.288	<0.758	<0.253	<0.758	0.314J+	27.4	<0.0794	Resinous, black material around pipe
#1067	#1067	5/29/2014	NA	NA	NA	D	so	0	179	<0.739UJ	12.7	153	<0.246	<0.493	41.6	14.2	117	161	0.629	113	<0.739	<0.246	<0.739	23J+	266	0.155	Stockpile sample of material removed from debris pit
#1068	#1068	5/29/2014	NA	NA	NA	E	so	0	179	<0.746UJ	15.4	148	0.286	<0.498	42.4	15.8	101	79.5	0.721	301	<0.746	<0.249	<0.746	28.5J+	222	0.262	Debris pit, dark gray soil
#1069	#1069	5/29/2014	NA	NA	NA	D	so	0	179	<0.746UJ	2.67	166	0.356	<0.498	20.8	11.9	108	109	0.398	21.6	<0.746	<0.249	<0.746	33.4J+	166	0.153	Stockpile sample of material from debris pit, brownish soil
#1070	#1070	5/29/2014	NA	NA	NA	E	so	0.5	177.5	293J-	39.9	3520	<0.251	16.5	123	38.4	1250	13500	4.51	405	<0.754	<0.251	<0.754	22.4J+	12500	—	Black soil from pit that contains debris with a burned appearance (not burned in place)
#1071	#1071	5/29/2014	NA	NA	NA	E	so	1	177	24.8J-	14	688	<0.248	4.18	138	33.8	933	1610	5.69	276	<0.743	<0.248	<0.743	25.4J+	2650	0.735	Sidewall of area that appeared burned (not burned in place)
#1072	#1072	5/29/2014	NA	NA	NA	E	so	0	178	<0.754UJ	<0.754	79.7	0.36	<0.503	9.92	2.61	75.7	88.5	0.522	18.8	<0.754	<0.251	<0.754	3.47J+	233	0.392	White, chalky material
#1073	#1073	5/29/2014	NA	NA	NA	D	so	0	178	2050J-	32.8	202	<0.249	<0.498	21.5	9.66	198	16100	1.29	25.2	<0.746	0.617	<0.746	27.3J+	389	0.297	Stockpile sample from debris pit containing glass and brick layer
#1099	#1099	6/4/2014	NA	NA	NA	V	so	2	176	<0.75UJ	2.76	150	0.388	<0.5	18.5	11.9	29.8J+	59.7J	<0.25	17.4	<0.75	<0.25	<0.75	36.6	81.9j+	<0.0833	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1100	#1100	6/4/2014	NA	NA	NA	V	so	2	176	<0.758UJ	6.37	146	0.382	<0.505	19.9	13.2	63.7J+	37.3J	0.311	44.6	<0.758	<0.253	<0.758	35.1	123j+	<0.0847	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1101	#1101	6/4/2014	NA	NA	NA	V	so	2	176	<0.746UJ	1.14	166	0.449	<0.498	20.5	13.8	21.4J+	2.57J	0.278	15.9	<0.746	<0.249	<0.746	41.5	65.8j+	0.0993	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1102	#1102	6/4/2014	NA	NA	NA	V	so	2	176	<0.725UJ	1.5	157	0.439	<0.483	19.4	13.3	19.5J+	1.72J	<0.242	14.7	<0.725	<0.242	<0.725	40.1	63.2j+	<0.0694	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1103	#1103	6/4/2014	NA	NA	NA	V	so	2	176	<0.728UJ	3.1	117	0.263	0.534	20.5	8.77	75.2J+	94.6J	0.371	42.8	<0.728	<0.243	<0.728	27.9	271J+	0.31	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1104	#1104	6/4/2014	NA	NA	NA	V	so	2	177	<0.739UJ	0.981	107	0.317	2	20.2	11.2	55J+	30.8J	1.26	15.1	<0.739	<0.246	<0.739	30.1	334J+	0.185	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1105	#1105	6/4/2014	NA	NA	NA	V	so	2	176	<0.75UJ	1.53	135	0.391	<0.5	17.6	11.7	19.1J+	4.64J	<0.25	13.7	<0.75	<0.25	<0.75	35.6	69.1J+	<0.0781	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1106	#1106	6/4/2014	NA	NA	NA	V	so	2	176	<0.732UJ	0.817	125	0.392	<0.488	16.6	11.3	16.1J+	1.6J	<0.244	12.1	<0.732	<0.244	<0.732	35.5	52.8J+	<0.082	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1107	#1107	6/4/2014	NA	NA	NA	V	so	2	176	<0.735UJ	0.925	132	0.388	<0.49	17.4	11.7	16.5J+	1.68J	<0.245	12.7	<0.735	<0.245	<0.735	37.5	54.3J+	<0.0847	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1108	#1108	6/4/2014	NA	NA	NA	V	so	2	177	<0.732UJ	1.21	155	0.371	<0.488	16.6	11.5	23J+	10.6J	<0.244	13.7	<0.732	<0.244	<0.732	34.8	110J+	0.342	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1109	#1109	6/4/2014	NA	NA	NA	E	so	2	177	<0.743UJ	24.6	142	0.405	<0.495	22.1	10.8	108J+	97.2J	0.437	18.3	<0.743	<0.248	<0.743	32.9	256J+	0.396	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1110	#1110	6/4/2014	NA	NA	NA	V	so	2	177	<0.761UJ	2.16	137	0.394	<0.508	18	12	24.1J+	8.11J	<0.254	13.5	<0.761	<0.254	<0.761	36.3	69.6J+	<0.0862	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1111	#1111	6/4/2014	NA	NA	NA	V	so	2	176	<0.735UJ	1.54	138	0.387	<0.49	17.8	12.3	21.4J+	8.37J	<0.245	14	<0.735	<0.245	<0.735	36.6	67.3J+	0.0803	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1112	#1112	6/4/2014	NA	NA	NA	V	so	2	176	<0.728UJ	1.08	120	0.371	<0.485	15.6	10.7	16.3J+	2.65J	<0.243	11.9	<0.728	<0.243	<0.728	34.1	54.3J+	<0.0758	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1113	#1113	6/4/2014	NA	NA	NA	V	so	2	176	<0.743UJ	1.32	165	0.423	<0.495	19.2	12.4	63.7J+	1.76J	<0.248	17.5	<0.743	<0.248	<0.743	39.1	62.5J+	<0.0781	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1114	#1114	6/4/2014	NA	NA	NA	V	so	2	176	<0.761UJ	2.33	178	0.384	<0.508	20.9	12.9	108J+	98.5J	<0.254	35.5	<0.761	<0.254	<0.761	36.3	113J+	<0.0781	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1115	#1115	6/4/2014	NA	NA	NA	V	so	2	176	<0.739UJ	1.21	147	0.405	<0.493	18.3	12.6	18.9J+	2.4J	<0.246	14	<0.739	<0.246	<0.739	38.5	61.7J+	<0.082	Soil removal verification samples for Parcel 6, samples collected after the removal of #1066 to #1073 and #1056 to #1060
#1116	#1116	6/5/2014	NA	NA	NA	V	so	2	177	<0.728	1.08	109	0.33	<0.485	13.9	10.1	14.6	1.67	<0.243	10.4	<0.728	<0.243	<0.728	31.7	50.5	<0.0806	Soil removal verification samples for Parcel 6, samples collected after the removal for #1066 to #1073 and #1056 to #1060
#1117	#1117	6/5/2014	NA	NA	NA	V	so	2	177	<0.75	1.38	137	0.326	<0.5	17.8	10.7	24.6	30.4	<0.25	13.4	<0.75	<0.25	<0.75	33	110	<0.0833	Soil removal verification samples for Parcel 6, samples collected after the removal for #1066 to #1073 and #1056 to #1060
#1118	#1118	6/5/2014	NA	NA	NA	E	so	2	177	27.6	2.43	245	0.369	<0.49	20.9	12.3	156	613	<0.245	18.8	<0.735	<0.245	<0.735	35.7	297	0.0942	Soil removal verification samples for Parcel 6, samples collected after the removal for #1066 to #1073 and #1056 to #1060
#1119	#1119	6/5/2014	NA	NA	NA	V	so	2	176	<0.725	0.933	143	0.334	<0.483	16	12.4	22	12.5	<0.242	12.7	<0.725	<0.242	<0.725	32.9	116	<0.0847	Soil removal verification samples for Parcel 6, samples collected after the removal for #1066 to #1073 and #1056 to #1060
#1120	#1120	6/5/2014	NA	NA	NA	E	so	2	176	<0.739	2.01	536	0.293	<0.493	18.1	9.53	1060	679	0.72	17.3	<0.739	<0.246	<0.739	29.6	633	0.165	Soil removal verification samples for Parcel 6, samples collected after the removal for #1066 to #1073 and #1056 to #1060

TABLE 5
SOIL SAMPLE RESULTS - METALS
Phase V Area - Pechiney Cast Plate, Inc. Facility
3200 Fruitland Avenue
Vernon, California

EPA Test Method 6010/7242, units in mg/kg																											
Sample ID	Map Reference ID	Date Sampled	Concrete Removal Area or Grid	Soil Removal Area	Associated Structure Number	Status	Sample Matrix	Sample Depth - Bottom (feet bls)	Sample Elevation (MSL)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium, Total	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury	Remarks
#1121	#1121	6/5/2014	NA	NA	NA	V	so	2	176	<0.743	1.56	129	0.352	<0.495	17.5	12.8	20.4	11.1	<0.248	16.2	<0.743	<0.248	<0.743	32.4	64.7	<0.0833	Soil removal verification samples for Parcel 6, samples collected after the removal for #1066 to #1073 and #1056 to #1060
#1126	#1126	6/16/2014	NA	NA	NA	V	so	3	175	<0.773UJ	1.43	117	0.314	<0.515	13.9	10.2	13.8	0.905J-	<0.258	10.4	<0.773	<0.258	<0.773UJ	31	45.2J-	<0.0794	Parcel 6, verification sample for removal of #1118 and #1120
#1127	#1127	6/16/2014	NA	NA	NA	V	so	3	176	<0.754UJ	1.35	119	0.326	<0.503	14.7	10.9	16.2	0.703J-	0.39	11	<0.754	<0.251	<0.754UJ	32.4	50.2J-	<0.0833	Parcel 6, verification sample for removal of #1118 and #1120
#1128	#1128	6/16/2014	NA	NA	NA	V	so	3	176	<0.735UJ	1.97	121	0.327	<0.49	15	10.7	14.6	1.38J-	<0.245	10.9	<0.735	<0.245	<0.735UJ	32.5	50.6J-	<0.0806	Parcel 6, verification sample for removal of #1118 and #1120
#1129	#1129	6/16/2014	NA	NA	NA	V	so	2.5	176.5	<0.761UJ	2.27	122	0.34	<0.508	15.7	10.9	20.8	5.76J-	<0.254	11.6	<0.761	<0.254	<0.761UJ	33.4	55.9J-	0.121	Parcel 6, verification sample for removal of #1109
#1130	#1130	6/16/2014	NA	NA	NA	V	so	2.5	176.5	<0.758UJ	1.09	113	0.314	<0.505	13.9	10	14	1.06J-	<0.253	10.3	<0.758	<0.253	<0.758UJ	30.8	44.8J-	<0.0794	Parcel 6, verification sample for removal of #1109
#1131	#1131	6/16/2014	NA	NA	NA	V	so	3	176	<0.75UJ	9.99	121	0.341	<0.5	15.4	10.6	28.3	22.8J-	<0.25	11.7	<0.75	<0.25	<0.75UJ	32.8	75.1J-	<0.0833	Parcel 6, verification sample for removal of #1109
#1162	#1162	6/24/2014	NA	NA	NA	V	so	3	175	<0.743UJ	<0.743	116	0.351	<0.495	16.4	10.1	20.7	15.8	<0.248	19.8	<0.743	<0.248	<0.743UJ	35.9	95.7	<0.0877	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1163	#1163	6/24/2014	NA	NA	NA	V	so	3	175	<0.761UJ	<0.761	123	0.391	<0.508	17.7	11.3	16.3	2.86	<0.254	12.2	<0.761	<0.254	<0.761UJ	40.8	55.3	<0.082	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1164	#1164	6/24/2014	NA	NA	NA	V	so	3	175	<0.721UJ	0.796	109	0.293	<0.481	16.3	9.31	36.3	48.2	<0.24	19.5	<0.721	<0.24	<0.721UJ	31.5	129	0.117	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1165	#1165	6/24/2014	NA	NA	NA	V	so	3	175	<0.758UJ	1.95	158	0.341	1.92	22.1	11.5	37	45.8	0.378	28.4	<0.758	<0.253	<0.758UJ	35.6	771	0.128	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1166	#1166	6/24/2014	NA	NA	NA	V	so	3	175	<0.761UJ	2	125	0.324	<0.508	23.1	10.6	52.9	94.5	<0.254	44.9	<0.761	<0.254	<0.761UJ	33.2	198	0.125	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1167	#1167	6/24/2014	NA	NA	NA	V	so	3	175	<0.75UJ	3.87	130	0.387	0.623	20.8	11.9	35.4	18.3	<0.25	39.5	<0.75	<0.25	<0.75UJ	39.4	240	0.231	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1168	#1168	6/24/2014	NA	NA	NA	V	so	3	175	<0.773UJ	<0.773	141	0.452	<0.515	20	12.7	19.5	2.19	<0.258	14.1	<0.773	<0.258	<0.773UJ	45	60.6	<0.0862	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1169	#1169	6/24/2014	NA	NA	NA	V	so	3	175	<0.739UJ	<0.739	140	0.422	<0.493	21.9	12.6	26.2	13	0.269	24.2	<0.739	<0.246	<0.739UJ	43.7	80.1	<0.082	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1170	#1170	6/24/2014	NA	NA	NA	V	so	3	175	<0.739UJ	<0.739	135	0.422	<0.493	19.3	12.4	18.8	3.29	<0.246	14.5	<0.739	<0.246	<0.739UJ	44.2	61.1	<0.0781	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1171	#1171	6/24/2014	NA	NA	NA	V	so	3	175	<0.743UJ	<0.743	133	0.403	<0.495	19.8	12.1	22.3	13.5	<0.248	14.9	<0.743	<0.248	<0.743UJ	41.8	84	<0.082	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1172	#1172	6/24/2014	NA	NA	NA	V	so	3	175	<0.743UJ	1.06	66.6	0.383	<0.495	17.6	9.65	19.7	35.1	<0.248	14.1	<0.743	<0.248	<0.743UJ	33.6	75	<0.0877	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1173	#1173	6/24/2014	NA	NA	NA	V	so	3	175	<0.75UJ	<0.75	116	0.369	<0.5	16.8	10.8	15	1.72	<0.25	11.6	<0.75	<0.25	<0.75UJ	38.5	50.4	<0.0806	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1174	#1174	6/24/2014	NA	NA	NA	V	so	3	175	<0.75UJ	<0.75	139	0.439	<0.5	20	12.8	18.8	2.18	<0.25	14	<0.75	<0.25	<0.75UJ	44.3	60.9	<0.0833	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1175	#1175	6/24/2014	NA	NA	NA	V	so	3	175	<0.739UJ	<0.739	137	0.413	<0.493	19.9	12.4	26.4	8.86	0.271	14.3	<0.739	<0.246	<0.739UJ	43	76.8	<0.0847	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1176	#1176	6/24/2014	NA	NA	NA	V	so	3	175	<0.754UJ	<0.754	148	0.45	<0.503	20.8	13.2	21.2	3.82	0.28	23.6	<0.754	<0.251	<0.754UJ	46	76.3	<0.082	Verification sample for the soil removal of metal-impacted material, Parcel 6, fill material
#1228	#1228	7/2/2014	NA	NA	NA	V	so	0	187	<0.743	<0.743	30.3	0.386	<0.495	5.5	2.67	32.1	25.5	0.348	12.3	<0.743	0.571	<0.743	5.93	47.6	<0.0833	Parcel 6, white material from stockpile
#1247	#1247	7/15/2014	NA	NA	NA	V	so	2.5	175.5	<0.746	0.76	315	0.364	<0.498	35.1	10.7	19.8	9.66	<0.249	12.5	<0.746	<0.249	<0.746	34.7	75.7	0.11	Verification sample for southern extent of metals impacted area
#1248	#1248	7/15/2014	NA	NA	NA	V	so	2.5	175.5	<0.746	<0.746	137	0.396	<0.498	18.6	11.8	18.9	5.25	<0.249	13	<0.746	<0.249	<0.746	38.2	69.3	<0.0847	Verification sample for southern extent of metals impacted area
#1249	#1249	7/15/2014	NA	NA	NA	V	so	2.5	175.5	<0.754	<0.754	143	0.387	<0.503	17.5	11.7	21.7	13.3	<0.251	13.4	<0.754	<0.251	<0.754	37.6	78.7	<0.0833	Verification sample for southern extent of metals impacted area
#1332	#1332	8/4/2014	NA	NA	NA	E	so	3	175	<0.743	11.3	205	0.323	1.23	25.3	15.3	109	197	1.24	29.7	<0.743	<0.248	<0.743	32.1	386	0.358	Verification sample beneath RCRA Stockpile
#1332	#1332-5	8/11/2014	NA	NA	NA	V	so	5	173	<0.75	1.62	74.6	0.251	<0.5	16.1	9.42	16.2	1.56	<0.25	14	<0.75	<0.25	<0.75	25.5	42.4	<0.0833	Verification sample for removal of #1332
#1333	#1333	8/4/2014	NA	NA	NA	V	so	3	175	<0.743	5.08	159	0.347	<0.495	17.2	13.4	46.9	35.5	0.288	42.6	<0.743	<0.248	<0.743	37.4	129	<0.0794	Verification sample beneath RCRA Stockpile

Abbreviations
so = soil
ot = other
< = not detected at the stated reporting limit
-- = not analyzed
feet bls = feet below slab/surface
mg/kg = milligram per kilogram
J = estimated concentration
UJ = analyte was not detected at a level greater than or equal to the approximate reporting limit
NA = not applicable

J+ = estimated concentration potentially biased high
J- = estimated concentration potentially biased low
E = excavated
V = verification sample
D = disposed